NOTE VII.

NEW AND LITTLE-KNOWN NEUROPTERA

BY

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Albardia furcata, v. d. Weele.

[Notes Leyden Mus. 23, pp. 234 and 235 (1903)].

I have compared this species with *Haploglenius* and *Episperches* but better I could compare it with the Australian genus *Stilbopteryx* Newm. which I had not seen before I made my description.

The form of the head with the very short antennae, which are, like those of *Stilbopteryx*, shorter than the thorax, the round pterostigma, ferrugineous in *Albardia*, white in *Stilbopteryx*, and also the simple sinuated postcosta are characters of near relationship. According to Mc. Lachlan (J. Linn. Soc. XI, p. 229, 1871) the *Stilbopteryx* ♂ has a pelotte, and must therefore be placed in the Myrmeleontidae, in *Albardia* it is wanting and therefore this genus belongs to the Ascalaphidae. By the simple and sinuated postcosta the two genera are related to all American Schizophthalmous Ascalaphidae at one side and to the Myrmeleontid genera *Echthromyrmex* M. Lachl. (Asia) and *Dimares* Hagen (Central America) at the other side. According to Mc. Lachlan *Stilbopteryx* is also related to the Australian species of *Suphalasca* Lefèbvre.

They may also be regarded as the representatives of an original group, connecting Ascalaphidae and Myrmeleontidae.

Probably the lost *Byas microcerus* Ramb. from the Antilles ought to be placed also in the neighbourhood of *Albardia*. Mc. Lachlan since long possesses a couple of *Albardia* from the same locality.

Ascalaphus immaculatus, Olivier.

Ascalaphus immaculatus, Oliv. Encycl. Méthod. III, p. 246.
Haploglenius » » Mc. Lachlan, J. L. S. XI, p. 238, n. 13, note.

In the collection of the Leyden Museum I found an *Ascalaphus* with the name *immaculatus* Oliv. in the handwriting of the late Mr. Snellen van Vollenhoven. As Mc. Lachlan mentions in his »Attempt towards a systematic classification of the family Ascalaphidae", in the genus *Haploglenius* an undeterminable *Ascalaphus immaculatus* Oliv., I could not doubt that this was Olivier's type. It bears on the label of origin »Raye, Amer. mer." Also from the same collection »Raye" from which we possess other types of Olivier of Neuropterous insects. The locality »Amer. mer." is the same as Olivier mentions and his description being insufficient it is impossible that Mr. Snellen v. Vollenhoven, who never occupied himself with Neuroptera, could make this determination.

The specimen is in tolerably good condition. But one of the antennae is wanting and the villosity is so dirty that it is impossible to distinguish the colours of it. It is a *Haploglenius* which has much relation to *Episperches* and the length of the wings, as well as the colour of the pterostigma, agree very well with Walker's *damnosus*. The specimen is probably a male, the length of the abdomen being larger than in Walker's *damnosus* which is a female, but I cannot find anything of the prothoracical valve. Not having *damnosus* Wlk. at my disposal, I cannot surely explain this question.

Cordulecerus inquinatus, Gerst.

[M. T. Vorpomm. 19, p. 89 (1888)].

Among a collection of Ascalaphidae from Chauchamayo, Peru, I found a ♂ specimen of a *Cordulecerus* (now in my collection) which I longtimes regarded to be new, but now I refer it with certainty to *inquinatus* Gerst.

It differs from Gerstäcker's description in the following character. The wings are wholly dark smoky brown, so that the very small pterostigma is difficultly to be found. Gerstäcker writes that his types have wholly hyaline wings, not at all tinted and this would be a good prima facie character to distinguish it from the related *vulpecula*-group. My specimen is quite mature and has flown longtimes. We may believe that Gerstäcker's type-specimens were young or immature ones and that *inquinatus* like the related *vulpecula* Brm. etc. also gets brown wings by higher degree of maturity

Ulula praecellens, Gerst.

[M. T. Vorpomm. 16, p. 3 (1884)].

Belongs certainly to the genus *Cordulecerus* in the neighbourhood of *surinamensis* F. and *subiratus* Wlk., the club of the antennae being spoonshaped and ochraceous, whereas in the genus *Ulula* it is pyriform and dark coloured. Also the abdominal segments are partly ochraceous and black as in *Cordulecerus*. Such colours are unknown to me in *Ulula*. The anal angle of the hind wings is obtuse-angular so that the transition from anal border in hind border is to be seen. In true *Ulula*-species, with the exception of *ampla* M. Lachl., the hind border is gradually rounded off.

Gerstäcker's type is a ♀, my specimen also; the male is unknown and when discovered the question will be surely explained.

My specimen is from Lita (Ecuador). I got it by means of purchase from the London naturalist Rosenberg.

Helicomitus philippinensis, n. sp.

Antennae black, some fulvous joints at the base, reaching about the beginning of the pterostigma. The joints in the apical half somewhat thickened. The five joints preceding the last three before the club, provided at the tip, on the inside, with a distinct dent which is directed backwards.

Face wholly yellow, with white hairs; the tips of the mandibles black.

Vertex brown with greyish hairs mixed with black.

Occiput yellow with two large, shining black spots behind the eyes.

Eyes brownish, shining, with the upper division nearly twice the size of the lower.

Thorax black, above with a very broad yellow stripe along the middle, extending from the prothorax up to $^3/_4$ of the length of the sixth abdominal segment. The underside greyish brown, with short white villosity and a white spot on the sides between the insertions of the wings.

Legs yellow, tip of tibiae, articulations of the tarsi and the claws, black. Femora and tibiae with some long white hairs. Spurs black, straight, those of the two anterior pairs of legs as long as the first two tarsal joints taken together. Those of the hindlegs as long as the first tarsal joint.

Abdomen brownish black, bare; the first segment broad at the base, with two black hairtufts which are directed backwards, in the middle it is strongly constricted and then gradually thickened towards the tip; second and third segment also thickened, but the third is diminishing towards the tip and so the following segments.

The yellow streak on the abdomen is narrow on the 2 first segments, the largest breadth it has on the third segment and then it is gradually diminishing to $^3/_4$ of the 6th segment. The pleurae of the 3rd and 4th segment are also yellowish and the dark brown underside has on the sides a yellowish coloration on the 3rd, 4th and 5th segment. The following segments are all dark brown, except the apical one, which has a yellow colour and is clothed with short black hairs; at the underside it has a yellow genital valve with an obtuse tooth, directed backwards.

Wings hyaline with smoky brown coloration, probably caused by maturity. Network rather open. Anterior pair larger and broader than the posterior one. The costal area with 24 nervules, decreasing in breadth from near the base to about half the length of the wing, then nearly parallel with the subcosta.

Pterostigma blackish brown, consisting of 6—7 nervules.

Pterostigmatical area consisting in the basal part of 2 rows of cells, in the apical part of 3 rows.

The tip is gradually rounded off. The anterior border nearly parallel with the hind border, but the anal angle is very distinctly indicated because the wing gets here gradually its largest breadth, that is at about one third from the base. The base somewhat excavated, not appendiculated. Postcosta confluent with the lower branch of cubitus in all the wings. The hindwings have the shape of the anterior ones but they are smaller and narrower. Anterior and posterior margin more convergent towards the tip, in the first third they get their largest breadth; the inner margin is clothed with some very slender greyish hairs, and has no incision.

20—22 costal veinlets. Costal area decreasing suddenly in breadth from the 6th costal veinlet taken from the base and then nearly parallel with the subcosta.

Pterostigma pitchy with black veinlets like in the forewings. Five veinlets.

Length	of	antennae	19	mM.	
breadth	»	head	5	»	
length	»	body	27	»	
»	»	abdomen	19	»	
»	»	forewing	24	»	, greatest breadth 7 mM.
»	»	hind »	20	»	, » » 6 »

One male from Luzon (Philippines), Montes Florida blanca low. 9—10 June 1903, collected by Waterstradt. By the very great confusion in the species of *Helicomitus* it is possible that my species must be referred to Walker's *H. immotus* from China, but he describes a ♀ and I only possess a male. In the collection of the Leyden Museum is a ♂ *Helicomitus* from Celebes very similar to my species.

Hybris flavicans, n. sp.

This species is more related to the China and Japanese *subjacens* Wlk. than to *javanus* Burm.

A good prima facie character to distinguish the new species from the species above mentioned is the colour of the body. This is pale yellow, much paler than in *subjacens* and *javanus* and the distribution of this colour is larger than in these species.

The whole dorsum of the abdomen yellow, except a dark brown streak on the tergites near the pleurae in the first and last segments. The pleurae are dark brown and the underside is brown, not black like in the other species.

Last segments of the male inflated.

Appendices of the male large, reddish, bare, at the inside with short black hairs. The form is like that of *subjacens* but stronger and curved inwards in the middle. The best difference is in the large genital valve which is black, with reddish margins and is prolonged between the appendices in a long, red, backwards curved tooth, the tip of which surpasses the back for about 1 mM. The length of the tooth is about that of the appendices. Neither *javana* nor *subjacens* has such a tooth at the genital valve.

The colour of the thorax is also paler yellow and the dark coloration not so bright.

The villosity of the body is less than in the other species and not so darkly coloured.

The wings are relatively narrower and seem to get sooner a dark brown colour than in other *Hybris*-species. The margins and the costalmargin get a somewhat darker colour than the disk of the wing.

Head yellow, mouthparts etc. yellow, antennae reddish at the base, ferrugineous towards the middle and getting a black colour towards the club. Club black.

Legs red.

Tandjong Morawa (Serdang: N. E. Sumatra). Collected by Dr. B. Hagen.

Also a ♂ from Dr. Everts' collection with the locality »Deli, Sumatra", in my own collection.

Dr. H. A. Hagen mentions in his »Synopsis Hemerobidarum Synonymica", S. E. Z. 27 (1866), an *Ascalaphus flavicans* i. l. Mus. Berol. from Sumatra which he refers to the genus *Hybris*.

Though I never saw that species, I suggest that my species is the same as that of the Berlin Museum and therefore I give it the same name.

The types are in the collection of the Leyden Museum and a couple in my own collection.

In the Leyden Museum 3 ♀, 2 of which are immature, and 1 ♂ from Tandjong Morawa.

In my collection 1 ♀ from Tandjong Morawa and 1 ♂ from Deli.

Hybris borneënsis, n. sp.

Very similar to *flavicans* and probably only the Borneo representative of it, but distinct by the following characters.

The male appendices are more of the form of *javana* Brm. but larger, gradually curved inwards and clothed with long black hairs. The colour is red. The genital valve also has a tooth but this does not surpass the back. Colour of the abdomen as in *javana* and the black markings of the tergites are all present and broader than in *flavicans* but not so broad as in *javana*. Wings limpid like those of *javana*, veins black excepted subcosta, radius and the insertion which are ferrugineous.

Pterostigma pitchbrown, with 4 crossveinlets.

Antennae reaching the tip of the pterostigma, fulvous in the basal half, pitchy towards the tip, the club black.

Legs red, spurs red, equalling in length the first tarsal joint.

Expanse of wings 67 mM.

One ♂ from Staudinger under the name *subjacens* Walker, with locality »Borneo".

I did not see the ♀.

The type is in my collection.

Acanthaclisis MacLachlani, n. sp.

This remarkable species from N. W. Australia differs from the known Australian species *conspurcata* Gerst., *fundata* Wlk. and *subtendens* Wlk. by the fuscous colour of the body, excepted the articulations of the abdomen and some spots on the prothorax which are testaceous and by the dark coloured forewings, where all cross-veinlets are black and bordered with fuscous so that they seem to be transversely striped.

Antennae short, thickened towards the tip, about as long as head and prothorax taken together, black, with narrow yellowish annulations.

Face and mouthparts testaceous, last joint of the labial palpi fusiform.

Tips of mandibles black. Vertex and occiput fuscous, above the insertion of the antennae a transverse greyish stripe. Occiput somewhat inflated, with an indistinct longitudinal furrow. Eyes greyish black.

Prothorax longer than broad, narrower in front. Front border with a slight incision. There are four indistinct testaceous spots, each in a corner of the trapezoid fuscous upperside. The sides are clothed with fuscous, forewards directed, long hairs.

Mesothorax fuscous, underside less dark coloured, with long whitish villosity, upperside with short fuscous hairs, borders testaceous. Scutellum with 2 round testaceous markings. Insertion of the wings yellow.

Metathorax fuscous, with testaceous borders and long whitish hairs on the sides. This villosity is directed to the middle of the metathorax. Scutellum fuscous. Insertion of the wings yellow.

Legs with whitish villosity and black spines. Anterior pair black, excepted the tip of tibiae which is ferrugineous.

Second pair like the first.

Posterior pair: femora ferrugineous with dark articulations; tibiae black, with a long ferrugineous stripe at the outside not reaching the tips.

Claws strong, black. Spurs black, slightly curved, nearly straight, somewhat longer than the two first tarsal joints taken together.

Abdomen dark fuscous, somewhat »pruinosus" on the first segments and there also with some short dark villosity; articulations testaceous, last segment black with dense black villosity, appendices wanting.

Wings limpid, tolerably narrow. In the costal area the first 6—7 nervules simple, the rest biareolated and before the pterostigma some simple and furcated nervules. Pterostigma narrow, nearly wholly fuscous in the upper and basal part, a luteous marking in the lower apical part.

Subcosta, radius and cubiti fuscous, with small luteous interruptions. Postcosta confluent with the lower cubitus and from the point of their junction are 3 veinlets broadly bordered with fuscous, connected with the hind border.

Cubiti joining the hind border close to the tip and about straight below the apical tip of the pterostigma.

Hindwings of the same shape as the forewings, somewhat shorter; the subcosta, radius and cubiti as in the forewings. Costal-area with simple nervules. Pterostigma larger than in the forewings, with a larger luteous apical part, all cross- and small longitudinal veinlets black, not bordered with fuscous. In the postpterostigmatical area are the transverse veinlets fuscous and also on the hindborder of the tip, forming there a fuscous cloud which ends straight along the cubiti.

Length of body	30—43	mM.
» » abdomen	28—31	»

Length of forewing 41—48 mM.
» » hindwing 37—43 »

The two type-specimens from Roeburne, N. W. Australia, in my collection, one in Mr. Mc. Lachlan's collection, that he got from myself, and also two or three in the British Museum. Mr. Mac Lachlan kindly informed me that the species is very remarkable and surely new and therefore I name it after him.

According to the form of the spurs, this species cannot be placed in the genus *Acanthaclisis* Ramb., but when splitting up it must be placed in a genus to which will belong the known Australian species with two rows of cells in the costal area of the forewings and with slightly curved spurs.

I think all specimens I saw are females, because I could not discover anything of the pelotte.

Cymothalis liberiensis, n. sp.

In the collection of the Leyden Museum are two specimens of this remarkable genus which are collected by Mr. F. X. Stampfli at the Junkriver in Liberia, Africa. I thought that I had *eccentros* Walker or *dulcis* Gerstäcker before me, but they differ in several characters from these species, so that I believe they belong to a new species or to a new variety of one of the species above mentioned. It may be that all described *Cymothalis* species are varieties of *eccentros* Walker.

Head and thorax dark brown, eyes metallic, mouthparts yellow, antennae whitish with brown tip and base.

Prothorax much longer than broad, metathorax with two small whitish lines. Abdomen redbrown, without any markings.

Legs white, with some black spines. Spurs as long as the two first tarsal joints taken together. Near the tip of the tibia of the hindlegs is a black spot at the outside; feet whitish, with dark articulations of the tarsis. Claws black.

Wings with whitish subcosta, radius and cubiti, dotted with many very small brown spots. Cross-veinlets, excepted the costal-veinlets, brown. Markings of the wings brown, of about the same colour as head and thorax.

Forewings: the apical marking includes near the hindborder a vitreous triangular spot. Before the pterostigma an oblique brown stripe.

Second band divided in two parts as in *eccentros*, the upper part is oblique, subquadrate and does not attain the costa; the second is placed beyond it, about on the middle of the hindborder, and has the form of an oblique *n*. The hindborder has many very small brown spots. Near the base there is an uninterrupted oblique brown stripe, which begins at the radius and is slightly angulated in the cubiti, the tip of this angle is directed towards the apex of the wing.

Hindwings longer and narrower than the forewings, the brown marking of the tip attains the apex but has an obtuse-angular trigonal hyaline spot at the upper side in which are many brown points, and a less obtuse-angular hyaline spot on the hind border, nearly without dark points. In the anal angle there is an oblique irregular oviform brown spot and from this towards the apex there are two larger and some small dark brown spots on the hindborder.

Radius with small triangular brown spots; also the cubiti and the cross-veinlets, that attain the hindborder, with black points. Neuration dark brown as in the forewings.

Length of body	♀ 32		♂ ± 24		mM.
» » abdomen	♀ 24		♂ ± 18		»
» » forewing	♀ 39		♂ $28^{1}/_{2}$		»
» » hindwing	♀ $46^{1}/_{2}$,		♂ 37		»
greatest breadth of forewing	♀ $13^{1}/_{2}$	mM.	♂ 10		mM.
» » » hindwing	♀ $8^{1}/_{2}$	»	♂ $6^{1}/_{4}$		»

A couple, preserved for some time in alcohol. The male is much smaller than the female and has a dark brown pelotte. Types in the Leyden Museum.

Berotha Piepersii, n. sp.

Among the Neuropterous Insects of the Leyden Museum I found a couple of a *Berotha*-species, collected at Rembang, Java, by Mr. M. C. Piepers. It differs in some characters from Brauer's *indica* from Ceylon, though it agrees in many important characters with this species. As I never saw *Berotha indica* Brauer, it may be that my species is probably a larger, geographical form of it.

Head yellow, front and vertex maculated with grey, and with a blackish villosity; occiput yellow with yellow villosity. Mouthparts and underside of the head dark, with dark villosity.

Palpi shining black, with yellow annulations.

Antennae yellow, first joint longer than the head, with yellow villosity at the underside. Eyes plumbeous.

Prothorax yellow, with blackish villosity, the sides and underside grey.

Meso- and metathorax above somewhat darker than the prothorax and with less villosity.

Legs yellow whitish, with a long grey villosity on tibiae and tarsi. The femora with less yellowish villosity. All annulations black.

Abdomen reddish, with long yellow hairs and dark annulations. The male has two appendices, pressed to the underside of the abdomen, straight, 1 mM. long, slightly curved inwards, with dense black villosity, somewhat thickened at the tips.

Wings of the same shape as Brauer describes for his *Berotha indica*, viz.: narrower than in the other known species of *Berotha*.

Forewings hamatiform and truncated at the tip, membrane grey, with yellow villosity, all cross-veinlets black, with black margins. The longitudinal veins yellow, with dense black points. Costal-veinlets furcated, black; costal area curved outwards near the base and then suddenly diminishing behind the 6th costal veinlet. Pterostigma consisting of a series of black points with yellow interruptions. It begins at the junction of radius and subcosta and ends at the spot where the anterior border curves backwards. The outmost series of gradate veins is divided into two portions, the first portion consists of 5 veins and begins at the middle of the pterostigma. The second portion lies more towards the base, it consists of 3 veins and ends on the upper cubitus. On the lower cubitus are two cross veinlets which are very dark black and have the appearence of large black points. All margins of the forewings with grey villosity, which is the longest on the hindborder near the base.

Hindwings lanceolate, broader towards the apical part, membrane grey, all veins yellow, costal area with simple veinlets, black, in the enlargement near the base, they are more distinct than in the rest of the costal area where they are pointlike. The pterostigma as large as in the forewings, but only with some few black spots, its veinlets are distinctly furcated. There are 3 gradate veins in the lower part of the broad apical portion of the wing.

Greatest breadth of forewing	♂	$3^1/_2$	mM.	♀	3	mM.
» » » hind »	♂	3	»	♀	$2^1/_2$	»
length of forewing	♂	11	»	♀	10	»
» » hind »	♂	9	»	♀	9	»
» » body	♂	7	»	♀	7	»

The male is distinct from the female by the broader wings, by the darker and longer ciliated legs and by the appendices.

I dedicate the species to its collector, Mr. M. C. Piepers.

The Hague, March 1904.